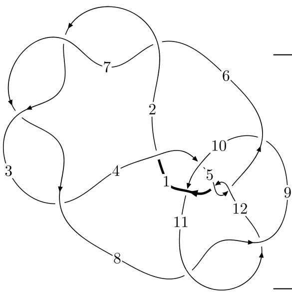
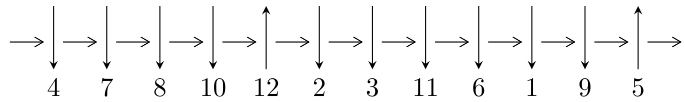
$12a_{1036}$ $(K12a_{1036})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$$3,8 \xrightarrow[c_3]{} 4,11 \xrightarrow[c_8]{} 9 \xrightarrow[c_{11}]{} 12 \xrightarrow[c_7]{} 7 \xrightarrow[c_2]{} 2 \xrightarrow[c_1]{} 1 \xrightarrow[c_6]{} 6 \xrightarrow[c_5]{} 5 \xrightarrow[c_{10}]{} 10 \twoheadrightarrow c_4, c_9, c_{12}$$

Ideals for irreducible components[2] of $X_{\textbf{par}}$

$$I_1^u = \langle 1.00424 \times 10^{43} u^{79} + 4.59153 \times 10^{43} u^{78} + \cdots + 3.52066 \times 10^{43} b - 2.24988 \times 10^{43},$$
$$2.59495 \times 10^{43} u^{79} + 5.15203 \times 10^{43} u^{78} + \cdots + 1.76033 \times 10^{43} a + 4.42143 \times 10^{43},\ u^{80} + 2u^{79} + \cdots + 3u - 1$$
$$I_2^u = \langle 2b + 3,\ a + 1,\ u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 81 representations.

[1]The image of knot diagram is generated by the software "**Draw programme**" developed by Andrew Bartholomew(`http://www.layer8.co.uk/maths/draw/index.htm#Running-draw`), where we modified some parts for our purpose(`https://github.com/CATsTAILs/LinksPainter`).

[2]All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

I.

$\boldsymbol{I_1^u = \langle 1.00\times10^{43}u^{79} + 4.59\times10^{43}u^{78} + \cdots + 3.52\times10^{43}b - 2.25\times10^{43},\ 2.59\times10^{43}u^{79} + 5.15\times10^{43}u^{78} + \cdots + 1.76\times10^{43}a + 4.42\times10^{43},\ u^{80} + 2u^{79} + \cdots + 3u - 1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -1.47413u^{79} - 2.92674u^{78} + \cdots + 2.87021u - 2.51170 \\ -0.285241u^{79} - 1.30417u^{78} + \cdots - 0.132168u + 0.639050 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -1.19118u^{79} - 2.62336u^{78} + \cdots + 4.64115u - 2.35738 \\ -0.0380110u^{79} - 1.07750u^{78} + \cdots + 1.66477u + 0.484932 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -0.672774u^{79} - 0.857234u^{78} + \cdots - 2.79688u - 0.488433 \\ -0.356975u^{79} - 0.458287u^{78} + \cdots - 1.89586u + 0.215000 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^2 + 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^4 - 3u^2 + 1 \\ u^6 - 2u^4 - u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^3 + 2u \\ -u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.273315u^{79} - 0.539846u^{78} + \cdots + 1.40791u - 0.578088 \\ -0.900556u^{79} - 0.871675u^{78} + \cdots - 1.82355u + 0.679557 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -1.05861u^{79} - 0.640733u^{78} + \cdots + 0.478677u - 1.55838 \\ -1.31826u^{79} - 0.626854u^{78} + \cdots - 3.06336u + 1.53127 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.998004u^{79} - 3.77601u^{78} + \cdots - 4.55085u - 10.1964$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{80} - 18u^{79} + \cdots + 12967u - 1633$
c_2, c_3, c_6 c_7	$u^{80} - 2u^{79} + \cdots - 3u - 1$
c_4	$u^{80} - u^{79} + \cdots - 22u + 8$
c_5, c_{12}	$u^{80} - 2u^{79} + \cdots - u - 1$
c_8, c_{11}	$u^{80} - 2u^{79} + \cdots - 105u - 4$
c_9	$2(2u^{80} + 17u^{79} + \cdots + 668890u + 195281)$
c_{10}	$2(2u^{80} - u^{79} + \cdots + 37298u - 1559)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{80} + 6y^{79} + \cdots + 33342983y + 2666689$
c_2, c_3, c_6 c_7	$y^{80} - 90y^{79} + \cdots - 9y + 1$
c_4	$y^{80} - 9y^{79} + \cdots - 3892y + 64$
c_5, c_{12}	$y^{80} + 58y^{79} + \cdots - 9y + 1$
c_8, c_{11}	$y^{80} - 58y^{79} + \cdots - 2705y + 16$
c_9	$4(4y^{80} - 413y^{79} + \cdots - 9.97980 \times 10^{11}y + 3.81347 \times 10^{10})$
c_{10}	$4(4y^{80} + 179y^{79} + \cdots - 4.44111 \times 10^{8}y + 2430481)$

(vi) Complex Volumes and Cusp Shapes

	Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$0.710776 + 0.643207I$		
$a =$	$0.885948 - 0.811257I$	$-4.80399 - 1.23940I$	0
$b =$	$1.183380 - 0.325061I$		
$u =$	$0.710776 - 0.643207I$		
$a =$	$0.885948 + 0.811257I$	$-4.80399 + 1.23940I$	0
$b =$	$1.183380 + 0.325061I$		
$u =$	$-1.071960 + 0.150156I$		
$a =$	$-1.167190 - 0.522833I$	$-8.96202 - 6.56324I$	0
$b =$	$-1.59214 - 0.23719I$		
$u =$	$-1.071960 - 0.150156I$		
$a =$	$-1.167190 + 0.522833I$	$-8.96202 + 6.56324I$	0
$b =$	$-1.59214 + 0.23719I$		
$u =$	$-0.710675 + 0.561732I$		
$a =$	$-1.317040 - 0.460428I$	$-1.10749 + 8.10126I$	0
$b =$	$-1.77036 - 0.25799I$		
$u =$	$-0.710675 - 0.561732I$		
$a =$	$-1.317040 + 0.460428I$	$-1.10749 - 8.10126I$	0
$b =$	$-1.77036 + 0.25799I$		
$u =$	$0.690803 + 0.566225I$		
$a =$	$1.61403 - 0.52729I$	$-6.0204 - 13.6937I$	0
$b =$	$1.99838 - 0.45165I$		
$u =$	$0.690803 - 0.566225I$		
$a =$	$1.61403 + 0.52729I$	$-6.0204 + 13.6937I$	0
$b =$	$1.99838 + 0.45165I$		
$u =$	$1.087620 + 0.310670I$		
$a =$	$0.871693 - 0.378049I$	$-3.59474 + 0.54452I$	0
$b =$	$1.52235 - 0.10204I$		
$u =$	$1.087620 - 0.310670I$		
$a =$	$0.871693 + 0.378049I$	$-3.59474 - 0.54452I$	0
$b =$	$1.52235 + 0.10204I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.633761 + 0.498635I$ $a = -1.03703 - 1.17829I$ $b = -0.977072 - 0.435927I$	$-1.33572 - 7.46742I$	$-11.1826 + 9.5153I$
$u = 0.633761 - 0.498635I$ $a = -1.03703 + 1.17829I$ $b = -0.977072 + 0.435927I$	$-1.33572 + 7.46742I$	$-11.1826 - 9.5153I$
$u = 0.318682 + 0.726773I$ $a = 0.73666 - 1.24121I$ $b = 0.293019 - 0.055818I$	$-3.65149 - 3.40355I$	$-15.8663 + 9.7793I$
$u = 0.318682 - 0.726773I$ $a = 0.73666 + 1.24121I$ $b = 0.293019 + 0.055818I$	$-3.65149 + 3.40355I$	$-15.8663 - 9.7793I$
$u = -0.599259 + 0.512610I$ $a = 0.482290 - 0.886004I$ $b = 0.411608 - 0.215285I$	$2.07455 + 3.71807I$	$-4.86829 - 5.38246I$
$u = -0.599259 - 0.512610I$ $a = 0.482290 + 0.886004I$ $b = 0.411608 + 0.215285I$	$2.07455 - 3.71807I$	$-4.86829 + 5.38246I$
$u = -0.654476 + 0.408860I$ $a = 2.13802 + 0.15533I$ $b = 1.89759 + 0.54937I$	$-6.07316 + 4.58559I$	$-17.4937 - 8.2107I$
$u = -0.654476 - 0.408860I$ $a = 2.13802 - 0.15533I$ $b = 1.89759 - 0.54937I$	$-6.07316 - 4.58559I$	$-17.4937 + 8.2107I$
$u = 0.600089 + 0.409057I$ $a = -1.43887 + 0.37749I$ $b = -1.75891 + 0.90980I$	$-1.82378 - 2.98170I$	$-10.11561 + 6.06219I$
$u = 0.600089 - 0.409057I$ $a = -1.43887 - 0.37749I$ $b = -1.75891 - 0.90980I$	$-1.82378 + 2.98170I$	$-10.11561 - 6.06219I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.663019 + 0.295461I$ $a = -1.85860 + 1.35693I$ $b = -1.23197 + 0.84021I$	$-6.77446 - 0.42985I$	$-19.7000 + 2.6791I$
$u = 0.663019 - 0.295461I$ $a = -1.85860 - 1.35693I$ $b = -1.23197 - 0.84021I$	$-6.77446 + 0.42985I$	$-19.7000 - 2.6791I$
$u = 0.560189 + 0.430465I$ $a = -0.088937 + 0.123185I$ $b = 0.438182 + 0.745626I$	$-1.57329 - 1.33652I$	$-10.84600 + 4.10196I$
$u = 0.560189 - 0.430465I$ $a = -0.088937 - 0.123185I$ $b = 0.438182 - 0.745626I$	$-1.57329 + 1.33652I$	$-10.84600 - 4.10196I$
$u = -0.202836 + 0.676160I$ $a = 0.03227 - 1.63491I$ $b = 0.135199 + 0.115033I$	$0.39318 - 3.94675I$	$-7.46064 + 5.59144I$
$u = -0.202836 - 0.676160I$ $a = 0.03227 + 1.63491I$ $b = 0.135199 - 0.115033I$	$0.39318 + 3.94675I$	$-7.46064 - 5.59144I$
$u = 0.239815 + 0.662724I$ $a = -0.02247 - 2.06927I$ $b = -0.277197 - 0.045286I$	$-4.68567 + 9.55045I$	$-10.51022 - 4.70720I$
$u = 0.239815 - 0.662724I$ $a = -0.02247 + 2.06927I$ $b = -0.277197 + 0.045286I$	$-4.68567 - 9.55045I$	$-10.51022 + 4.70720I$
$u = -1.304910 + 0.149597I$ $a = -0.938271 + 0.143542I$ $b = -1.56342 - 0.08918I$	$-8.74851 + 6.64165I$	0
$u = -1.304910 - 0.149597I$ $a = -0.938271 - 0.143542I$ $b = -1.56342 + 0.08918I$	$-8.74851 - 6.64165I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.673205 + 0.061428I$		
$a = 0.557215 + 1.268730I$	$-3.81684 - 2.51015I$	$-16.7147 + 3.2878I$
$b = -0.343363 + 0.602925I$		
$u = -0.673205 - 0.061428I$		
$a = 0.557215 - 1.268730I$	$-3.81684 + 2.51015I$	$-16.7147 - 3.2878I$
$b = -0.343363 - 0.602925I$		
$u = -0.564500 + 0.320140I$		
$a = 1.47412 + 0.99082I$	$-2.47702 + 1.06134I$	$-6.54054 - 7.20108I$
$b = 1.56072 - 0.33590I$		
$u = -0.564500 - 0.320140I$		
$a = 1.47412 - 0.99082I$	$-2.47702 - 1.06134I$	$-6.54054 + 7.20108I$
$b = 1.56072 + 0.33590I$		
$u = -0.338597 + 0.546034I$		
$a = -1.121980 + 0.163936I$	$2.83880 - 0.05741I$	$-2.05176 - 2.16439I$
$b = -0.643789 + 0.047876I$		
$u = -0.338597 - 0.546034I$		
$a = -1.121980 - 0.163936I$	$2.83880 + 0.05741I$	$-2.05176 + 2.16439I$
$b = -0.643789 - 0.047876I$		
$u = -0.471894 + 0.402538I$		
$a = 1.24902 + 1.00105I$	$-3.05065 + 1.47279I$	$-24.2014 + 56.8592I$
$b = -5.06449 + 0.31875I$		
$u = -0.471894 - 0.402538I$		
$a = 1.24902 - 1.00105I$	$-3.05065 - 1.47279I$	$-24.2014 - 56.8592I$
$b = -5.06449 - 0.31875I$		
$u = 0.274551 + 0.532663I$		
$a = 1.62148 + 0.87755I$	$-0.29599 + 3.88984I$	$-7.52657 - 3.20009I$
$b = 0.821167 + 0.129127I$		
$u = 0.274551 - 0.532663I$		
$a = 1.62148 - 0.87755I$	$-0.29599 - 3.88984I$	$-7.52657 + 3.20009I$
$b = 0.821167 - 0.129127I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.43956 + 0.08554I$ $a = 0.402543 + 0.391723I$ $b = 1.356760 - 0.062941I$	$-2.80082 - 2.02963I$	0
$u = 1.43956 - 0.08554I$ $a = 0.402543 - 0.391723I$ $b = 1.356760 + 0.062941I$	$-2.80082 + 2.02963I$	0
$u = -1.46069 + 0.03248I$ $a = -0.184564 + 0.602641I$ $b = -1.365120 + 0.065647I$	$-5.60735 - 2.30773I$	0
$u = -1.46069 - 0.03248I$ $a = -0.184564 - 0.602641I$ $b = -1.365120 - 0.065647I$	$-5.60735 + 2.30773I$	0
$u = 0.476315$ $a = -0.663294$ $b = 0.350154$	-0.838451	-11.2140
$u = 0.216462 + 0.420429I$ $a = -0.604851 - 0.421093I$ $b = 0.134724 + 0.520809I$	$-0.69298 - 1.54541I$	$-5.72121 + 3.62378I$
$u = 0.216462 - 0.420429I$ $a = -0.604851 + 0.421093I$ $b = 0.134724 - 0.520809I$	$-0.69298 + 1.54541I$	$-5.72121 - 3.62378I$
$u = 1.54898 + 0.09118I$ $a = -0.574298 + 0.052082I$ $b = 0.29424 - 5.06759I$	$-9.91410 - 3.08787I$	0
$u = 1.54898 - 0.09118I$ $a = -0.574298 - 0.052082I$ $b = 0.29424 + 5.06759I$	$-9.91410 + 3.08787I$	0
$u = -1.55217 + 0.06245I$ $a = 0.348266 + 0.379294I$ $b = 0.0510261 + 0.0183574I$	$-7.65108 + 0.72597I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.55217 - 0.06245I$ $a = 0.348266 - 0.379294I$ $b = 0.0510261 - 0.0183574I$	$-7.65108 - 0.72597I$	0
$u = -1.55805 + 0.12389I$ $a = 0.1199480 - 0.0670336I$ $b = -0.904546 + 0.950420I$	$-8.71709 + 3.34696I$	0
$u = -1.55805 - 0.12389I$ $a = 0.1199480 + 0.0670336I$ $b = -0.904546 - 0.950420I$	$-8.71709 - 3.34696I$	0
$u = 0.292333 + 0.313766I$ $a = -0.89591 + 1.77166I$ $b = 0.533166 + 0.109441I$	$-0.956674 + 0.198529I$	$-8.23896 + 1.94124I$
$u = 0.292333 - 0.313766I$ $a = -0.89591 - 1.77166I$ $b = 0.533166 - 0.109441I$	$-0.956674 - 0.198529I$	$-8.23896 - 1.94124I$
$u = 1.57069 + 0.09402I$ $a = -0.774131 + 0.123567I$ $b = -4.38000 + 0.20219I$	$-9.78363 - 2.58458I$	0
$u = 1.57069 - 0.09402I$ $a = -0.774131 - 0.123567I$ $b = -4.38000 - 0.20219I$	$-9.78363 + 2.58458I$	0
$u = -0.122168 + 0.406621I$ $a = -0.33255 + 3.35354I$ $b = -0.425855 + 0.579814I$	$-4.64791 - 1.68703I$	$-12.27481 + 1.77640I$
$u = -0.122168 - 0.406621I$ $a = -0.33255 - 3.35354I$ $b = -0.425855 - 0.579814I$	$-4.64791 + 1.68703I$	$-12.27481 - 1.77640I$
$u = 1.56874 + 0.14542I$ $a = 0.003029 - 0.556816I$ $b = -0.472962 - 0.693480I$	$-5.21523 - 6.10088I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.56874 - 0.14542I$ $a = 0.003029 + 0.556816I$ $b = -0.472962 + 0.693480I$	$-5.21523 + 6.10088I$	0
$u = 1.57689 + 0.04915I$ $a = -0.427844 + 0.716730I$ $b = -0.29426 + 1.63053I$	$-11.38890 + 1.92536I$	0
$u = 1.57689 - 0.04915I$ $a = -0.427844 - 0.716730I$ $b = -0.29426 - 1.63053I$	$-11.38890 - 1.92536I$	0
$u = -1.57467 + 0.11429I$ $a = 0.717948 - 0.208646I$ $b = 3.37554 + 1.92775I$	$-9.20749 + 4.87769I$	0
$u = -1.57467 - 0.11429I$ $a = 0.717948 + 0.208646I$ $b = 3.37554 - 1.92775I$	$-9.20749 - 4.87769I$	0
$u = -1.58095 + 0.14376I$ $a = 0.142667 - 0.856682I$ $b = 1.47628 - 1.26612I$	$-8.80818 + 9.82031I$	0
$u = -1.58095 - 0.14376I$ $a = 0.142667 + 0.856682I$ $b = 1.47628 + 1.26612I$	$-8.80818 - 9.82031I$	0
$u = -1.58987 + 0.08869I$ $a = 1.125870 + 0.310042I$ $b = 3.58856 + 1.72134I$	$-14.4580 + 1.8786I$	0
$u = -1.58987 - 0.08869I$ $a = 1.125870 - 0.310042I$ $b = 3.58856 - 1.72134I$	$-14.4580 - 1.8786I$	0
$u = 1.58915 + 0.11636I$ $a = -1.023910 - 0.470566I$ $b = -3.94751 + 0.70652I$	$-13.6989 - 6.5194I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.58915 - 0.11636I$ $a = -1.023910 + 0.470566I$ $b = -3.94751 - 0.70652I$	$-13.6989 + 6.5194I$	0
$u = -1.60000 + 0.17093I$ $a = -0.937135 + 0.257938I$ $b = -3.77653 - 1.29443I$	$-13.7368 + 16.4459I$	0
$u = -1.60000 - 0.17093I$ $a = -0.937135 - 0.257938I$ $b = -3.77653 + 1.29443I$	$-13.7368 - 16.4459I$	0
$u = 1.60636 + 0.16953I$ $a = 0.808875 + 0.187568I$ $b = 3.47460 - 1.05594I$	$-8.92279 - 10.84360I$	0
$u = 1.60636 - 0.16953I$ $a = 0.808875 - 0.187568I$ $b = 3.47460 + 1.05594I$	$-8.92279 + 10.84360I$	0
$u = -1.61481 + 0.18816I$ $a = -0.750411 - 0.028324I$ $b = -2.81157 - 1.09951I$	$-12.65290 + 4.33706I$	0
$u = -1.61481 - 0.18816I$ $a = -0.750411 + 0.028324I$ $b = -2.81157 + 1.09951I$	$-12.65290 - 4.33706I$	0
$u = 1.65476 + 0.00968I$ $a = 0.877810 - 0.183435I$ $b = 3.93380 - 0.49529I$	$-18.2055 + 6.2396I$	0
$u = 1.65476 - 0.00968I$ $a = 0.877810 + 0.183435I$ $b = 3.93380 + 0.49529I$	$-18.2055 - 6.2396I$	0
$u = -1.67139$ $a = -0.764088$ $b = -3.60862$	-13.4373	0

II. $I_2^u = \langle 2b+3,\ a+1,\ u-1 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -1 \\ -1.5 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -1 \\ -0.5 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ -2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.5 \\ -0.5 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -9.75$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_3 c_8, c_{12}	$u - 1$
c_4	u
c_5, c_6, c_7 c_{11}	$u + 1$
c_9, c_{10}	$2(2u - 1)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_5, c_6, c_7 c_8, c_{11}, c_{12}	$y - 1$
c_4	y
c_9, c_{10}	$4(4y - 1)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = -1.00000$ $b = -1.50000$	-3.28987	-9.75000

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)(u^{80}-18u^{79}+\cdots+12967u-1633)$
c_2, c_3	$(u-1)(u^{80}-2u^{79}+\cdots-3u-1)$
c_4	$u(u^{80}-u^{79}+\cdots-22u+8)$
c_5	$(u+1)(u^{80}-2u^{79}+\cdots-u-1)$
c_6, c_7	$(u+1)(u^{80}-2u^{79}+\cdots-3u-1)$
c_8	$(u-1)(u^{80}-2u^{79}+\cdots-105u-4)$
c_9	$4(2u-1)(2u^{80}+17u^{79}+\cdots+668890u+195281)$
c_{10}	$4(2u-1)(2u^{80}-u^{79}+\cdots+37298u-1559)$
c_{11}	$(u+1)(u^{80}-2u^{79}+\cdots-105u-4)$
c_{12}	$(u-1)(u^{80}-2u^{79}+\cdots-u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)(y^{80}+6y^{79}+\cdots+3.33430\times10^{7}y+2666689)$
c_2, c_3, c_6 c_7	$(y-1)(y^{80}-90y^{79}+\cdots-9y+1)$
c_4	$y(y^{80}-9y^{79}+\cdots-3892y+64)$
c_5, c_{12}	$(y-1)(y^{80}+58y^{79}+\cdots-9y+1)$
c_8, c_{11}	$(y-1)(y^{80}-58y^{79}+\cdots-2705y+16)$
c_9	$16(4y-1)(4y^{80}-413y^{79}+\cdots-9.97980\times10^{11}y+3.81347\times10^{10})$
c_{10}	$16(4y-1)(4y^{80}+179y^{79}+\cdots-4.44111\times10^{8}y+2430481)$